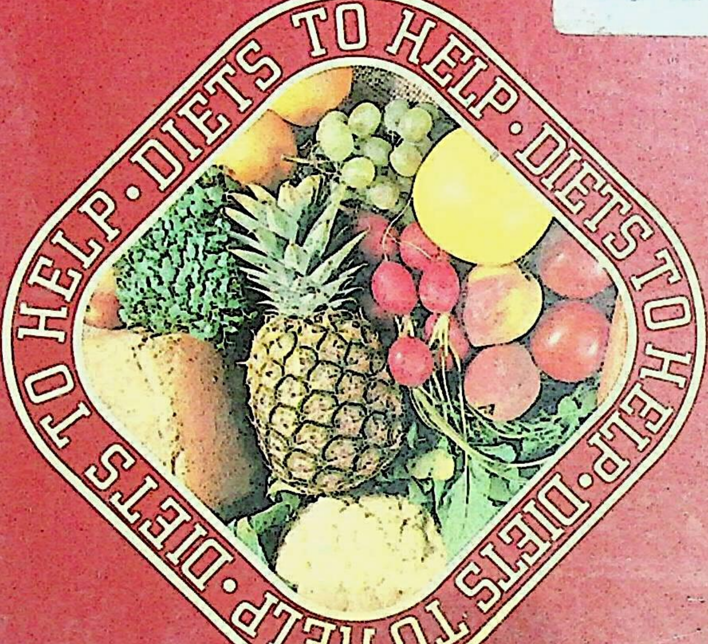
DIETS TO HELP
GALL BLADDER TROUBLES



Nalda Gosling
M.B.N.O.A., F.N.I.M.H., N.D., D.O.

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DIETS TO HELP GALL BLADDER TROUBLES

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by

NALDA GOSLING
M.B.N.O.A., F.N.I.M.H., N.D., D.O.

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INTRODUCTION

Coronary disease, cancer, diabetes, obesity, varicose veins and diseases of the digestive system including gallstones, diverticulitis, colitis and peptic ulcers, are amongst the conditions considered to be diseases of civilization. Statistics show that few peoples living in rural areas in the 'underdeveloped' countries of the world, and living on their own natural wholefoods, experience these conditions.

Causes

Hospital records from Natal, dealing with over 25,000 Zulu patients noted only five cases of gallstones. The Bantu, a South African tribe who live on wheat, corn, maize, peas and beans, have a low blood cholesterol. Few primitive peoples suffer from diseases of the digestive system, yet it has been shown that those people who change to western diet, high in refined carbohydrates, processed foods and soft drinks, begin to develop these conditions. The incidence of gallstones in American Negroes, American Indians, Canadian Eskimoes and even amongst upper class Japanese, all of whom have started eating a western diet, has increased at a considerable rate in recent years. Statistics are in most instances comparable to western countries.

The age of onset is becoming earlier and earlier, so that now even children in Sweden have been found suffering from gallstones, a condition in which 75 per cent of cases normally occur between the ages of 30 and 45. Gallstones are found in 20 per cent of all women and in 7 per cent of all men. A study carried out as part of the Boston Collaborative Drug Surveillance Program, reported in 1973, found double the incidence of gall bladder disease in women who were taking the oral contraceptive pill.

The cause of gallstones is surmised to be related to infection in some part of the bowel being transmitted to the gall bladder, setting up infection and causing a deposition of bile constituents to form around the bacteria and cell debris. The high incidence of gall bladder troubles in western civilization, where foods are eaten which are far removed from the natural, simple diet our ancestors ate, points most strongly to a nutritional origin.

Naturopathy-Natural Therapy

The naturopathic concept of disease is founded on the law of cause and effect, the view of the body as a whole, interrelated unit, and the belief in the body's natural healing forces. Treatment is directed at correcting any disharmony or imbalance, aiding the body's attempts at elimination and healing. Fasting was the first essential stage in treatment; long fasts being undertaken to eliminate accumulated wastes and toxins from the body, supported by hydrotherapy (water treatment) and followed by strict dieting until the condition had been overcome. The general health and vitality of the patient was greatly improved as a result of this therapy, many patients experiencing a higher standard of health than ever before.

Dietary Reform

Gall bladder problems arise as a result of imbalance in the system. This may be due to bile which is too concentrated, or is not flowing easily, or which is inadequately supplied by certain constituents, the ingredients for those being inadequately supplied in the diet. The body can manufacture much that it needs from foods, but with long-continued deficiency it must reach breaking-point at some time. This is when so-called 'disease' is evident. Inclusion in the diet of the necessary elements, together with adjustment of nutrition where required, can be a more permanent solution than recourse to the mere treatment of symptoms alone. Surgery, without attention to the cause

of a condition, is not always a lasting solution.

The purpose of this book is to help the sufferer from gall bladder problems to understand how the gall bladder works, how the wrong diet can contribute to the formation of stones, and how better health can be regained. Self-diagnosis is not recommended, and persistence of intense symptoms which do not respond to the measures described indicate that advice must be sought.

Gall bladder disease is associated with obesity and with over-eating. Discussion on various approaches to overweight and slimming are essential in dealing with gall bladder conditions, but this will take place within the context of health-building and achieving the optimum standard of health and vitality.

CHAPTER ONE

THE GALL BLADDER AND LIVER

One basic principle which ought to be instilled is that pain is a warning, and that it is a wrong policy to numb the nerve which is registering pain. If a railway signal were red because of a hazard at some distance along the track, one would not switch off the electric current and continue blithely along the line.

Because of a lack of knowledge the pain associated with gall bladder trouble can either be misinterpreted or can cause fear and panic. Pain arising from the gall bladder may be experienced in the upper abdomen, centrally or on the right side; the intense and, at times, agonizing pain when a gallstone is passing through the cystic bile duct can cause panic. The pain of an inflamed gall bladder often radiates to the right shoulder, usually being ascribed to fibrositis or rheumatism by the layman. With some knowledge this warning pain would lead to a helpful and practical course of action.

The Gall Bladder

Before discussing the importance of good nutrition a description of the gall bladder will be found helpful. Although small, and having no active function beyond acting as a reservoir for bile and excreting it when required, the importance of the part played by the gall bladder in maintaining good health cannot be underrated. The gall bladder is a small, pear-shaped sac which is attached to the underside of the liver, lying on the right side of the body just beneath the lower margin of the ribs. It is approximately 7 to 10cm (3 to 4 in) in length and 3cm (just over 1 in) at its widest part. Bile contains water, bile salts, bile pigments, mineral salts, lecithin and cholesterol.

The Function of Bile

The liver produces bile and secretes it continuously during the daytime into the gall bladder. When food, especially food containing fat, enters the duodenum from the stomach a hormone is secreted from the walls of the duodenum, stimulating both a flow of bile from the gall bladder and an increased production of bile by the liver. The gall bladder contracts vigorously, sending bile into the duodenum. Bile salts and lecithin act in conjunction with lipase, an enzyme secreted by the pancreas, to aid in the emulsification and digestion of fats.

In addition, bile produces an alkaline state in the intestines and stimulates peristalsis, thereby preventing constipation. If there is insufficient bile the undigested fats may coat other foods and inhibit their digestion, and may also combine with calcium and other nutrients to make the bowel contents dry, small and hard. Another important action of bile is to reduce the growth of bacteria, preventing putrefaction of intestinal contents.

Bile salts, manufactured by the liver from proteins, are essential for the absorption into the bloodstream of digested fats, vitamins A, D, E and K, and the pro-vitamin carotene which is converted into vitamin A.

The pigments in bile, bilirubin and biliverdin, are manufactured in the liver from haemoglobin, the red colouring matter of the red blood cells. After bile has been used for digestion the pigment is broken down, some passing into the intestine, some returning to the liver for re-use.

Lecithin

Lecithin, which has excited interest in recent years, is a phospholipid, an agent with an affinity for fats, capable of decreasing the deposits of fat in the liver. It has an emulsifying action on fat, breaking down the globules into particles tiny enough to be suspended in body fluids and transported throughout the body for use by the tissues. It is present in the structure of cells, especially those of the

nervous system. Lecithin has been found to reduce atheromatous plaques, accumulations of cholesterol on walls of blood vessels, thereby reducing risks of thrombosis. It is manufactured in the liver from essential fatty acids, B vitamins and other nutrients. Lecithin can control the amount of cholesterol in the blood; in good health, production of lecithin is increased when a meal rich in fats is taken. Conversely, it has been found that this substance was deficient in atherosclerosis, when blood cholesterol was high. Lecithin is present in a number of foods, the most valuable being unrefined vegetable oils, soya beans, nuts and wheat germ. The lecithin content of bile can be increased by taking these foods, and also by taking it in capsule or granular form.

Cholesterol

The most emotive substance in bile is cholesterol, a fat-like substance which is found in animal fats, milk and egg yolks. It is manufactured in the liver, and may be produced from fats or carbohydrates. Although it has gained a bogey-man reputation for its role in coronary thrombosis, it is essential to the body, only causing problems when in excess of the emulsifying agents and certain other nutrients. It is a major constituent of gallstones. Research has shown that stones are less likely to form when lecithin is present in the diet in adequate quantity. In one study one patient in eight had a reduction in the size of gallstones when taking a small daily dose of lecithin.

Gallstones consist mainly of cholesterol, although the pure white one is rare, the majority having a layer of pigment and salts around the white centre, indicating some inflammation. They vary in size, and may cause no symptoms of pain whatsoever. The tendency to form gallstones, which may form rapidly, may be of hereditary or hormonal origin, but more likely to occur when the following combination of factors are present: an excess of cholesterol in the bile, some inflammation or infection in

the gall bladder, inadequate flow of bile leading to stasis and a concentration of bile constituents which may settle and form deposits.

Gallstones and Cholecystitis

Although gallstones have been produced within a week in animals by controlling the diet strictly, the presence of stones in humans is usually preceded by a prodomal stage of inflammation of the gall bladder, cholecystitis. This has been ascribed to infection in the intestine or duodenum passing to the gall bladder, or following some acute condition such as influenza or food poisoning. Inflammation of the lining of the gall bladder gives rise to acute pain, with some symptoms of indigestion. The condition may become chronic and recurrent, associated with nausea, a feeling of fullness, and frequent bouts of 'dyspepsia', irregular indigestion completely unrelated to meals or food. There is also constipation alternating with diarrhoea and, occasionally, there are attacks of acute pain which indicate that stones are present.

The pains of gallstones appear suddenly, are severe, and will end equally suddenly. They may result from a journey or violent exercise, and are due to a stone passing down the cystic duct towards the duodenum. Small stones may be passed without any discomfort, and are eliminated from the bowels without being noticed. Colic arising from gallstones makes the sufferer restless, he feels cold but is sweating, and may be unable to take a deep breath.

Cholecystitis and gallstones are the main conditions affecting the gall bladder. Occasional cases of biliary colic occur in healthy young adults, and can be due to muscular spasm of the sphincter muscle, or to some anatomical abnormality causing a kinking of the cystic duct in certain body positions.

The Liver

Critical as the function of the gall bladder may be to digestive health and comfort, and however healthy and

intact the gall bladder may be, it is entirely dependent upon the liver. This organ, the largest gland in the body, is the primary organ of metabolism and is essential to life. So essential, that up to 80 per cent can be damaged yet its numerous functions are still continued. The liver acts as a filter, all blood flowing through and being subjected to innumerable chemical changes and actions. One and a half litres (about three pints) of blood pass through the liver every minute, 80 per cent of this being brought from the intestines by the portal vein, the remainder being freshly oxygenated blood from the lungs.

The liver completes the final stages of metabolism of carbohydrates, proteins and fats; it produces bile, lecithin, cholesterol, enzymes, co-enzymes, blood plasma, blood cells, fibrinogen, and heparin, which are clotting and anti-clotting properties of blood. It stores sugar as glycogen, iron, copper, trace minerals, vitamins A, D, E, K and B, it inactivates unwanted hormones and – perhaps the most important of its functions – detoxifies any harmful or poisonous substances which enter the bloodstream, converting them to harmless compounds. Drugs, chemicals in food or water, alcohol, toxins resulting from viral or bacterial action, are all converted as swiftly as possible. Immediate conversion may be impossible, but chemical action will take place in the liver until the task is completed. It can, for instance, take two hours for the alcohol from one drink to be rendered harmless.

Liver Damage

Damage to the liver, which can result from faulty diet or from an over-abundance of either toxins or fats, interferes with all or any of its functions, leading to various digestive disturbances, loss of energy, sleepiness, imbalanced hormones and a variety of other symptoms. A diet high in fats and refined carbohydrates and low in fresh raw foods can lead to fatty deposits in the liver itself, almost choking it. Increase of girth around the waist may be a sign of enlarged fatty liver. Considerable excess of toxins, as when

a person takes both drugs and alcohol can lead to irreparable liver damage and death.

The vital part played by the liver in metabolism and in maintaining health has been the subject of much research. It would seem to be more necessary now than in previous years; liver disease is increasing, no doubt associated with the proliferation of toxic chemicals in our environment. It is even found in quite young children, partly due to the high intake of soft drinks which contain a wide range of chemical flavourings and artificial sweeteners.

Dietetic experiments on animals have shown liver damage occurring on a diet high in refined carbohydrates and saturated fats, and deficient in minerals and proteins. The damage was quickly corrected when a balanced diet was given. Human recovery from the early stages of liver damage can be quite rapid, taking place in as short a time as six weeks with the introduction of correct diet and adequate vitamins.

CHAPTER TWO

FATS AND OBESITY

Fats and oils are essential to the body, being found in the brain and spinal cord, in the kidneys, liver, spleen, pancreas, heart, lungs and in all muscles. Fats are found in every cell in the body, forming part of the cellular structure, and are used for the production of certain hormones. Vitamins A, D, E and K, and some B vitamins require fats before they can be absorbed, and bile cannot be manufactured or excreted from the gall bladder without fats. During digestion fats are broken down into fatty acids, many of which have specific functions. All of these, with the exception of three, can be synthesized by the body from carbohydrates and proteins in a low-fat diet.

The three essential fatty acids (E.F.A.) because they are considered to be essential to life, are linoleic, linolenic and arachidonic acids, found in vegetable oils, and can only be produced in the body from foods which contain them. Soya bean oil, corn oil, sunflower seed and safflower oils are excellent sources, as also are sesame seed oil and walnut oil. Foods which contain E.F.A. in small quantities are nuts, wheat germ and avocado pears.

Fat is used by the body for energy, is stored in the liver and tissues, from where it can be reabsorbed into the bloodstream for use when required. Energy is normally derived from the metabolism of glycogen (glucose), but in fasting or inadequate diet, when carbohydrate has been used up, fat is burnt as energy.

Fat is also beneficial in the diet because, as its metabolism (digestion) is slower than that of carbohydrates, it satisfies the appetite for a longer time than does a meal which consists mainly of carbohydrates. The adipose tissue which results from excessive intake of carbohydrates and fats supports the organs of the body and the muscular framework.

In a study on the body's fat requirements carried out in 1929 rats which were fed on a fat-free diet developed dermatitis and other skin lesions, loss of hair, poor or stunted growth, and early signs of ageing, all of which were quickly cured by adding adequate essential fatty acids to the diet.

Saturated and Unsaturated Fats

The terms 'saturated' and 'unsaturated' fats can be confusing. The saturated fats are those which remain solid at room temperature and are mainly of animal origin – derived from meat, dairy foods (milk, cream, cheese, eggs, butter) and also from coconut oil and palm oil. The unsaturated or polyunsaturated fats are derived from the oils of seeds, nuts and from fish. They contain the essential fatty acids, sunflower seed and safflower oils being especially good sources of linoleic acid.

The fatty acids are described chemically as being in chains, the virtue of unsaturated fats being that some other nutrients can be attached to the chain and transported round the body. This is not possible with the saturated fats. If vitamin E is linked with fatty acids it prevents rancidity; if hydrogen is linked it makes the fatty acid solid, and therefore saturated. The fat supplies calories but no nutrition.

Fat, oil or any foods containing them must not be taken if there is even the slightest rancidity. Vitamin E is destroyed, as are the other oil-soluble vitamins, A, D and K, and several B vitamins. Any fat or food which has become rancid should be thrown away.

Cholesterol is linked with the fat intake, only causing trouble when in excess of the controlling factors, lecithin, methionine and B vitamins. In the healthy body it is found as an essential part of bile, liver, kidneys, adrenal glands, brain tissue and the covering membranes of nerves, and contributes to certain hormones. Its concentration in bile and in blood has been found to increase on a diet containing 65 per cent refined carbohydrates, and also by the interaction of sugar and saturated fats. Some research has shown that a combination of sugar and coconut oil raised blood cholesterol to the highest level. Coconut oil is used as the base for many imitation creams and milk.

The complex problem of cholesterol is dealt with adequately in *Diets to Help Control Cholesterol* (Thorsons, Wellingborough) in this series.

Metabolic Rate

Some obesity is due to sheer overeating. The amount of energy-producing foods in excess of energy output (that which is not burnt up), whether it is carbohydrate, fat or protein, is converted to fat and deposited in the tissues. The cause is, of course, more complex than that, as many thin or normal-weight people eat excessively and remain at a constant weight. One difference appears to lie in metabolic rate. Certain types of individuals burn up

energy quickly, while others utilize foods more slowly and so fat cells are deposited. There are two ways of depositing fat; forming new small cells in the tissues, which takes place in infants and children, and increasing the size of fat cells already present, which obviously occurs in adults. This adipose tissue can become solid over many years, is richly supplied with blood – therefore must be sensitive to the constituents of blood – and can be hard to break down.

Potassium/Sodium Balance

Another cause of excess weight is wrong potassium/sodium balance in the diet. Potassium has some control over the salt content of the body by remaining in body cells whilst sodium is present in body fluids. If potassium is deficient sodium may pass into the body cells together with tissue fluid, creating the state of oedema. It frequently happens that this type of overweight reduces at a good steady rate when a diet high in potassium foods is introduced. The finest source of potassium is green leafy vegetables, much that is present in other foods being lost in the refining process.

Fibre

A further cause is the lack of fibre in the diet. This is explained by Surgeon Capt. T.L. Cleave in his book *Diabetes, Coronary Thrombosis and the Saccharine Disease.* The refining of carbohydrates removes all the fibre from sugar, and virtually all from flour. He writes: 'The refining processes lead to unnatural concentration in the carbohydrate concerned, which deceives the tongue and the appetite, and leads to overconsumption ... with unrefined unconcentrated carbohydrates overconsumption does not occur, and obesity does not occur either.'

Fibre is essential for health, producing good, soft bowel motion, high fibre diet being prescribed now for colitis, duodenal ulcer, haemorrhoids and other diseases. It aids digestion by forcing adequate chewing and aids

elimination from the body. Sufficient fibre will be provided by the wholewheat bread and cereals, fruits and vegetables recommended in the diet contained in this book.

Further Causes

Other factors related to the problem of obesity are the hereditary factor and the type of food eaten. It has been shown that 40 per cent of children who have one obese parent will become overweight, as will 80 per cent of those whose parents are both obese, whilst only 10 per cent of children of normal-weight parents will grow obese. This can be due to both genetic factors and family eating habits. Overweight people usually eat a nutritionally poor diet, accentuating sweet and starchy foods, the very ones which they should avoid, deficient in many minerals and vitamins. They often suffer from hypoglycaemia, and the symptoms of weakness, dizziness, ravenous appetite and a craving for sweet foods lead to quick snacks of carbohydrates.

One other aspect of obesity must not be overlooked. Eating is one of the pleasures of life, and has either consciously or subconsciously an emotional connotation. Over-eating may be used by people who have certain types of stress – poor human relationships, lack of work satisfaction, or apparently insuperable problems – as a compensation or consolation.

CHAPTER THREE

NUTRITION AND HEALTH

As the incidence of diseases has changed in the western world in the recent past, infectious diseases such as the plague, typhoid, smallpox, tuberculosis, giving way to coronary thrombosis, diseases of the gastrointestinal tract,

dental decay, hypertension, schizophrenia and hyperactivity in children, so have eating habits changed.

Refined Flour

These changes have taken two forms. Firstly, the changes in some staple foods. Very little white bread was available, most bread being baked from wholewheat stoneground flour, until roller mills were introduced into this country in 1877. The white flour which resulted from this new method was deprived of wheat and bran, therefore losing 80 per cent of its fibre, 100 per cent vitamin E, calcium, iron, magnesium, potassium, B vitamins including B_6 and folic acid, fatty acids and some protein. It is obligatory for millers to add iron, refined chalk and two B vitamins to the white flour. Bleaching, emulsifying, stabilizing and preserving agents are also added. All the natural goodness of wheat is in the wheat germ and bran, minerals and vitamins which are vital to the maintenance of body function, but this is the part of wheat which was thrown away or fed to animals.

Experiments have shown that animals fed on bread made from white flour were stunted in growth or had died of malnutrition after ninety days, whilst others fed on a wholewheat bread were active and healthy.

Denatured Sugar

The refining of sugar concentrates the sweetness and loses fibre, iron and minerals. Sugar is too easily over-eaten; the average daily quantity, about 125g (5 oz) is equivalent to twenty average apples. Refined sugar provides sweet taste, calories and nothing else. Molasses contains 200 times the amount of magnesium found in white sugar. Magnesium has a stimulating effect on cell activity and energy. Deficiency can lead to drowsiness, fatigue, irritability, low blood pressure and tense muscles. A report in the *Lancet* in 1974 stated that magnesium deficiency, because of its effects on the muscles, led to protracted childbirth. An excess of refined sugar has been shown to

deplete the body of its B vitamins. It also interferes with the absorption of proteins and calcium, and overstimulates the production of insulin. There is evidence to show that the vast quantities of sweet foods consumed by young people could be a contributory cause of the alarming increase in restlessness and violence. Vitamin B_1 is necessary for completing the conversion of sugar (as glucose) into energy or fat. The production of acids is part of the process, and if the supply of B_1 is inadequate those acids remain in the body acting as irritants, especially to brain tissue.

Symptoms of Deficient Diet

Medical men and nutritionists have expressed concern at the rising statistics of hyperactivity, schizophrenia and related conditions. Considerable evidence has been amassed by Dr Weston Price, Dr Aubrey Westlake, Dr R. Mackarness, J.I. Rodale and others to show the relationship between a diet high in refined carbohydrates and antisocial behaviour, and the changes which take place in temperament when whole, natural foods are taken with an adequate supply of vitamins. Experiments on groups of people at the Mayo Clinic in America in which vitamin B_1 was withheld from an otherwise satisfactory diet, and was later added, gave adequate proof of the importance of this vitamin in behaviour problems. The volunteers became irritable, restless, quarrelsome, and suffered from depression. Within a day or two of being given the vitamin their symptoms began to clear.

Modern Trends

The second change in eating habits is due to technology. In less than fifty years there has been a proliferation of processed foods, an excess of convenience meals and snacks consisting mainly of white flour/white sugar products with added chemicals to flavour, stabilize, colour and preserve. Over 2,000 chemicals are used in foods. It was stated in the *Lancet* in 1969: 'During the

course of a year everyone in this country consumes, on average, some three pounds of chemical substances which are not normal constituents of food; and the quantity is increasing.' The food technology industry reached a state of absurdity with American canned blueberry pie filling which contained not a single blueberry, and potato crisps prepared from a dough of flour and dehydrated reconstituted potato, rolled out thin and fried flat so as to take up less space in packing and transport.

Fortunately, in spite of optimistic prophecies from the food technologists of increased synthesizing of our foods, there is a strong urge to return to natural wholesome meals, evidenced by the increasing number of health food stores, wholefood shops and warehouses, and books on food reform cookery.

All the nutrition we need is available in a diet which has adequate fresh raw foods, whole grains and good protein. Individual requirements vary according to age and activity, although the tables which are given in some books on nutrition can be used as a guide. If some nutrients are temporarily unavailable the body will synthesize or will draw on its stores to maintain homeostasis. If the deprivation continues for months or years the body's resources are eventually depleted and the machinery begins to fail. Nerves are taut, digestion becomes impaired, the skin and hair become dry, there is a lack of energy and a general feeling of being 'out of sorts'. This deprivation can arise as a result of commercialized processed foods dominating the diet.

Easy-to-prepare foods have unfortunately become accepted as a way of life, and have led to a diet which combines under-nutritious foods with a wide range of chemicals. An average three-course meal may consist of tinned or packeted soup, almost certainly containing monosodium glutamate, a 'flavour-enhancer' added to over 10,000 different processed foods in America, which has been found responsible for various allergy symptoms, found to produce brain damage in young animals and was

subsequently banned from processed baby foods. The second course, of meat and two vegetables is not entirely without hazard: the meat may contain traces of antibiotics used to treat the animal or of any one of the 143 chemicals used in its production. The vegetables will have lost a great deal of their vitamin C, minerals, and vitamin B_1 during cooking. Vitamin loss is unavoidable when boiling vegetables, but the cooking water contains the minerals and can be used. Dessert may consist of a mixture easily prepared from a packet. Instead of an artificial dish which may contain sugar, carrageen, adipic acid, potassium acid tartrate, edible vegetable gum, stabilizer, flavourings, saccharin and colour, an apple could be eaten. This will provide: natural silicon to nourish hair, skin and nails; potassium which stimulates cell activity; calcium, phosphorus and magnesium for healthy bones (calcium is also necessary for the nerves); sodium, which is required by many body fluids including bile and blood; a range of other trace elements; and small quantities of protein, fat and vitamin C. There is no comparison between the nutritional value, and it must be obvious that the long-term effects of either type of diet will create outstanding differences.

Experimental Studies

An experiment was carried out in a school in California in 1967 to teach a practical and memorable lesson in nutrition. Two rats were fed on different diets. The first one on foods which the children enjoyed: sweets, biscuits, cakes, hot dogs, soft drinks and crisps. This rat failed to gain weight, her coat was dull and thin, her eyes were dull, she suffered diarrhoea. The second rat was fed a balanced diet of fresh vegetables and fruit, meat and eggs, dairy products and bread. Her coat was silky, she was bright-eyed and alert, and she gained weight in the normal way.

More comprehensive experiments of this nature were carried out by Sir Robert McCarrison during his work as a Medical Officer in India in the 1920s. He studied the

health and diet of people in different regions of India, and fed groups of rats on their diets. The group of rats which remained most healthy was fed on foods eaten by the Hunzas, people living 8,000 feet up in the Himalayas. The food consisted of fresh vegetables and fruit, whole grains, pulses (peas, beans and lentils), some milk and a little meat. The rats fed on this diet suffered no disease at all in the period of five years. Other rats, given polished (white) rice, plenty of sweet food and very little meat or fresh vegetables, had poor health and did not live long. The standard of health of the different groups of rats was similar to that of the peoples whose diet they ate. Almost perfect health was experienced by the Hunzas at the time of Sir Robert McCarrison's research, with no disease of the digestive system.

Sir Robert believed firmly that the provision and maintenance of health was dependent upon food being fresh, whole, and grown on healthy soil. The type of food which in his opinion constituted an ideal diet was wholegrain cereals, pulses, milk and milk products, fresh vegetables and fruit, and occasional meat.

Numerous studies, too many to be detailed, come to the same conclusions. This diet can hardly be improved upon.

Dieting

The approach to diet must not be a negative one of 'have not' but a positive attempt to create enjoyable foods which include all that is required for good health. Much of what we eat is taken as a result of habit or convenience, with some pressure from the influence of advertising. Habit places the same popular packet of cereal on the breakfast table. A change to one prepared from wholewheat, full of natural goodness rather than added synthetic vitamins with sugar and salt to mask the tasteless flavour, will provide a more satisfying tasty start to the day's work.

The flavour of fresh raw fruits, or fruits cooked with only a little honey if sweetening is necessary, will be found far superior to commercial over-sweetened fruits. Fresh

raw peaches or pineapple in season, for example, are much more delicious than the tinned ones, and contain their full complement of vitamins, minerals and enzymes.

A daily salad may at first appear uninviting, but selection of a few ingredients from the wide range available, together with the use of various fresh or dried herbs can provide a different salad, of differing flavours, for almost every day of the year.

Delicious savoury dishes can be prepared, often with the subtle use of herbs, which provide adequate protein to replace meat. One of the first questions a vegetarian is asked is 'Whatever do you eat?' A variety of dishes can be prepared from nuts, legumes (peas, lentils, and many different beans), whole cereals, TVP (textured vegetable protein) and prepared mixtures from the health food store, as well as the conventional cheese and eggs.

The initial stages of the change to a wholefood diet may be difficult, with many different types of flavours to become accustomed to. Food will be less salty and less sweet, but with persistence the palate will change, and you will fully appreciate the natural flavours in your meals.

In attempting to effect a change to a wholefood diet, especially one which is directed toward relieving gall bladder problems, it will be found helpful to have guidance on the foods to avoid and those which will be beneficial.

FOODS TO AVOID	*REPLACED BY*
White flour	Wholewheat flour
White sugar and all products	A little honey or Barbados sugar
Animal fats	Vegetable oils
Commercially prepared foods containing chemicals	Natural, or home-prepared foods
Tea, coffee, cocoa, alcohol, soft drinks, beef concentrate	Weak china tea, herb teas, coffee substitutes, fruit juice, saltless yeast extract
Salt, vinegar, highly seasoned foods.	A very little sea salt, lemon juice, herbs.

Dietary Principles

In dealing with gall bladder problems, there must be two different approaches. Firstly, to deal with the insidious discomforts of indigestion, feeling of fullness, much gas and flatulence, occasional nausea, and variable bouts of diarrhoea or constipation. For this, the change to wholefoods diet, with particular attention being paid to the inclusion of nutrients which aid digestion and assimilation of fats, should be sufficient. This diet is also preventative, so should be continued for some time after the symptoms have cleared. The foods included will correct any imbalance in the diet and will improve general health in addition to correcting liver function and fat metabolism. Where either cholecystitis or gallstones have become evident, the dietary approach must be much more strict. In this case a lacto-vegetarian diet must be followed, with short spells of fasting to give the body a necessary physiological rest from its incessant work on digestion. In either case, if there is obesity it is necessary to lose weight. It is found that the majority of people who change to a balanced diet do gradually lose weight. Here is a reminder of the principles of natural eating.

1. *More raw foods* should be eaten. At least 50 per cent of the day's foods should be raw;

   Whole natural foods should be eaten, i.e. wholewheat, brown rice, wholewheat spaghetti and macaroni compost-grown foods, either from a health food store (flour, cereals, and also vegetables in some stores) or home-grown vegetables and salads, with compost made from all fruit and vegetable waste.
2. *Avoid* commercial, refined foods.

   Avoid white sugar.

   Avoid ready-prepared chemicalized foods.
3. *Cook wisely*, to conserve the goodness and flavour as much as possible.
4. *Ensure relaxed eating*. Never eat when over-tired, tense, angry or upset; chew the food well.
5. *Do not drink with meals* apart from a few sips of water

to alleviate thirst, or an aperitif of fruit or vegetable juice; other drinks should be at least half an hour before or two hours after a meal, except the remedial herb tea for flatulence recommended in the section on drinks.

6. *Do not over-eat*. Eat only when hungry. In gall bladder troubles it is wise to have several small meals rather than two or three large ones each day.

General Diet

An outline of the general diet is provided for your guidance. A wide range of items are given from which a few items may be selected according to season or availability.

On rising: A drink of fruit juice, diluted with hot or cold water according to season: apple, grape, pineapple, or pear juice may be diluted with equal parts water; lemon or grapefruit should be diluted in the strength of one tablespoonful to a tumbler of water, with a very little honey added.

The juice should be unsweetened, fresh when possible, otherwise bottled or tinned, free from chemicals.

Breakfast: Fresh fruit. Select from fruits in season: pears, apples, grapes, grapefruit, oranges, tangerines, nectarines, pineapple, raspberries, strawberries, blackberries, ripe blackcurrants, ripe bananas (not if trying to lose weight).

Alternatively, dried stewed fruit: prunes, apricots, peaches, dried fruit salad (not sulphur-dried) or baked/stewed apple, sweetened with a little honey, and with dates or raisins;

Cereal: muesli, with any selection of fruit added, or wholewheat cereal from health food stores, or Shredded Wheat; add one tablespoonful each of wheat germ, sunflower seeds and milled nuts to the cereal; add skimmed milk or soya/plant milk substitute;

Alternatively, 1-2 slices of wholewheat toast, with sunflower margarine and a little honey or Marmite.

Mid-morning: A drink of Marmite, Vecon or fruit juice.

Mid-day: A good mixed salad selected from: crisp lettuce, watercress, cress, endive, Chinese cabbage, chicory, cucumber, tomato, radish, celery, spring onions, finely shredded or chopped raw vegetables: cabbage, fennel root, carrot, beetroot, Spanish onion, leeks, small flowerets of cauliflower; green or red peppers.

The salad may be varied if salad dressing and one or more of the following chopped, fresh herbs are sprinkled over it, when available: chives, sage, rosemary, fennel, lovage, parsley, chervil, salad burnet, lemon balm, marjoram (used sparingly), thyme, dill, savory, mint, basil.

With the salad a baked jacket potato, cottage cheese, some nuts, cold nut savoury, sprouted seeds, or two or three wholewheat crispbread biscuits may be taken.

The salad meal may be completed by taking yogurt (not commercial sweetened yogurt), fresh fruit or a home-made fruit juice jelly made with seaweed.

If a packed lunch must be taken to work, wholewheat bread or crispbread could accompany some salad, even if the salad only consists of radishes (good for the gall bladder) celery, raw carrot, tomato, and a small amount of crisp greens. An apple or pear, or a few grapes and some nuts could complete the meal. In cold weather, if circumstances permit, a flask of hot home-made soup would be welcomed.

Mid-afternoon: Drink as above.

Evening: Home-made vegetable soup, unsweetened fruit juice, natural tomato juice, or melon/grapefruit.

Protein dish made from nuts, pulses, wholewheat cereals or any combination of these with a baked jacket potato, two or three conservatively cooked vegetables, or vegetable casserole, or with a green side-salad;

dessert of a fruit dish, fresh fruit salad, fresh fruit, or home-made fruit yogurt, or home-made fruit jelly.

Bedtime: Grapefruit juice, as in the morning, or other fruit juice, or a savoury drink from yeast extract.

If there is a tendency to insomnia a savoury drink using the water in which onions have been cooked will be found to help. It does not matter at which meal you have salad, but it is important that a salad be taken every day. In winter a home-made vegetable soup may precede the salad, or hot jacket potato or other hot savoury be taken with it.

Salad may, of course, accompany each main meal.

Sprouted Seeds

A useful supplement to salads, adding flavour, crisp crunchy texture and nutrition, is sprouted seeds. Mung beans are one of the quickest and easiest, being ready for eating in four days. Many pulses, grains and seeds can be sprouted, and increase their nutrition many times over. Vitamins A, B, C, E, and K are present, all of which are needed by the gall bladder sufferer. Protein and trace elements are also present. Sprouted peas, for example, contain almost 79mg of vitamin C in each 100g (4 oz).

It is possible to sprout lentils, soya beans, various other beans, peas, wheat, barley, rye, maize, alfalfa, fenugreek and other seeds, all by the same, simple method. All that is required is a container with a cover to act as a filter and ventilator, fresh water and a moderately warm atmosphere. Special sprouting boxes are available, but a start can be made with a glass jar (the smaller size of bottling jar is excellent) and cheesecloth, nylon net or muslin to cover.

Rinse one tablespoonful of mung beans, put into the jar and cover with a cupful of warm water. Leave to stand for 8 to 10 hours. Drain off the water. Rinse and drain the beans with tepid water three times daily, making sure the rinsing water is clear. If it is cloudy repeat the rinsing until

it is completely clear. Drain the sprouts thoroughly each time. Leave the jar in reasonable warmth, in a ventilated place. A cold atmosphere will inhibit growth. The sprouts are ready to eat by the time tiny leaf shoots are showing (the length of the shoot and the time required vary with different seeds) and can be sprinkled on salads, muesli, raw fruit compote, or – just before serving – on hot savoury dishes. The sprouts, when ready to eat, will keep well in a refrigerator for a further two or three days.

Seeds and pulses for sprouting are available at health food stores. Do not use those intended for planting as they will have been chemically treated.

Sunflower Seeds

Another food item of benefit to everyone, and with important food value for the gall bladder sufferer is sunflower seeds. Containing 24 per cent good quality protein, these seeds contain vitamins A, B_6 and other B vitamins, D, E, and K – all essential for the liver and gall bladder. In addition, the minerals calcium, potassium, iron and trace elements are present. The oil expressed from the seeds has already been referred to as a vital polyunsaturated oil. Sunflower seeds can be eaten as a snack, alone or with seedless raisins. They can also be sprinkled on muesli, cereals, fruits, and can be sprouted. The sprouted seeds are easy to digest, and take only one or two days to grow. They are ready for eating when the shoot is as long as the seed.

Sesame Seeds

Sesame seeds, a good source of methionine, the amino acid which contributes to reducing blood cholesterol and helps reverse accumulation of fat in the liver, are another valuable food. They can be used to sprinkle on top of bread or buns before baking, or when milled can be used in savoury or sweet dishes, or added to muesli. They are the base of a delicious savoury called tahini available from some health food stores.

CHAPTER FOUR

SPECIAL DIETS

Special diets for gall bladder problems must be followed strictly, otherwise the therapeutic effect will be lost. The two main conditions discussed in the chapter on the gall bladder will be discussed separately.

Cholecystitis, the condition which should be accepted as a warning stage of gallstones, can in most cases be overcome by strict dieting, in which fasting plays an essential role in affording rest to the digestive system. The scheme to follow is that of small meals, on the lines indicated below, with the vitamin supplements advised, and with fasting during the acute stage when pain is present. Fasting on water only can be very successful, but certain minerals and enzymes present in juices can assist the body during the lack of solid food. To obtain the full benefits from fasting care must be taken both during the fast and in the return to normal food. The duration of the fast should be three days, any period longer than that, undertaken by someone unused to fasting, should be under the supervision of a naturopath.

Books have been written on fasting. Fasting must not be undertaken by anyone on drug treatment, or suffering from any serious disease, especially diabetes, tuberculosis or malignancy. The normal action of metabolism, involving as it does catabolism (a breaking down) and anabolism (a building up) is a nourishing and cleansing of the body, which is rendered difficult when the diet contains an excess of stodgy foods deficient in the minerals and enzymes which aid the metabolic process.

Each cell of the body is a small chemical factory, carrying out absorption, digestion, amendment and elimination of the nutrients supplied by the blood. The process is continuous throughout life, as is the process of cell regeneration. The life of a red blood cell, for example, is 120 days, at the end of which the cell is broken down, its

iron and haemoglobin being returned to the liver to be re-used and other parts of the cell being eliminated from the body. Minerals, vitamins and enzymes aid the body in the cleansing and regenerating process.

Fasting Programme

In the acute stage of cholecystitis, the fast should be carried out as follows:

On rising: A tumbler of hot water containing one tablespoonful of grapefruit juice.

9 a.m. Cup of herb tea: comfrey, dandelion or fennel.

11 a.m. A tumbler of equal parts pear juice and warm water.

1 p.m. Warm water and grapefruit juice as above.

3 p.m. (Resting in bed for an hour if possible.) Pear juice as above.

5 p.m. A cupful of herb tea, as above.

7 p.m. Cup of freshly made vegetable clear broth.

9 p.m. Warm water and grapefruit juice as above.

More than this quantity of eight glasses of liquid may be taken during the day, according to thirst. Repeat this pattern on the second day; if the pain and other symptoms have cleared by the third day, you may include three or four cupsful of home-made vegetable broth, and more fruit juice, especially grape juice.

During the fast, bowel action must be ensured to aid in the eliminative process. The best method is to have an enema. Fresh air and reasonable exercise are beneficial, and it is quite possible to continue with light work. A short afternoon rest may be needed, although, after the initial feeling of hunger has passed, energy can actually increase.

Breaking Fast

The fast must be broken in the following way, *not* by having large meals, but by a gradual introduction of foods:

First day: Continue the fruit juices and vegetable broth as above, but have a few walnuts at breakfast time followed by a small apple. At lunchtime a small bowl of vegetable soup may be taken.

Second day: Juices continue, pear, and a few soaked prunes at breakfast, a small bowl of raw salad at lunchtime (to include finely chopped young dandelion leaves and fennel if possible) and a small bowl of good vegetable soup in the evening.

Third day: As above, but adding more fruit at breakfast, baked jacket potato to the mid-day salad, and a slice of wholewheat bread to the larger bowl of soup in the evening.

The rules to remember for your diet after these six days, when you return to what will be your normal eating, are to have small meals, to avoid animal fats and meat, and to supplement your diet with the nutrients which will help the liver to produce well-balanced bile fluid and to digest fats.

Important Foods

The foods to include both for cholecystitis and suspected gall stones are: pears; grapefruit; lemons; grapes; foods containing vitamins A, B, and E (see table on page 33); nuts; whole grains; up to 2 tablespoonsful olive or sunflower oil each day; and two egg yolks per week. Half your food must be raw fruits and vegetables/salads.

Table 1. Recommended Intake of Dietary Supplements

Nutrient	Quantity	Period
Vitamin A	5,000 i.u.	Daily
Vitamin D	2,000 i.u.	Per week
Vitamin E	200 i.u.	Per week
Brewer's yeast	2 tablespoonsful or 4 tablets	With each meal
Lecithin	2 tablespoonsful of granular lecithin	Daily
Olive or sunflower oil	2 tablespoonsful	Daily

Vitamins and other supplements, to be taken with meals, are given on previous page.

Special Requirements

The principal items in diet for the gall bladder sufferer are vitamins A, B, C, D, E, and K, lecithin, magnesium, methionine, pectin and potassium. Guidance as to the sources is given below.

Table 2. Showing the Sources and Importance of Essential Nutrients

Nutrient	*Sources*	*Comments*
Vitamin A	Milk, butter, margarine, green vegetables (particularly spinach and broccoli), carrots, tomatoes, and apricots.	Up to 30,000 i.u. required daily. Needs vitamin E to aid absorption.
Vitamin B	Brewer's yeast, wheatgerm, yeast extract (Marmite), B complex tablets.	Especially important are: inositol (500mg daily) – cholesterol and fat metabolism; biotin (25mg) – fat assimilator; and choline (500mg daily) – fat metabolism.
Vitamin B_6	Sunflower seeds, wheatgerm, soya beans, walnuts, bananas, avocado, salmon and chicken breast.	Needed to produce lecithin.
Vitamin C	Citrus fruits or juice, blackcurrants and vitamin C tablets.	Aids metabolism of cholesterol.
Vitamin D	Capsule form, milk, butter, margarine and sunshine.	Blood level is usually low in gall bladder disease.
Vitamin E	Wheatgerm, vitamin E capsules, alpha tocopherol.	Only alpha tocopherol survives heat, freezing or storage.
Vitamin K	Green leafy vegetables and unrefined foods.	Necessary for the normal clotting of blood.
Choline	Lecithin, yeast, wheatgerm and eggs.	This B vitamin helps to produce lecithin.

Nutrient	*Sources*	*Comments*
Lecithin	Soya beans, eggs, nuts, vegetable oils, essential fatty acids. Linoleic acid – safflower oil Linolenic acid – soya oil Arachidonic acid – peanut (arachis) oil	Needs vitamin B_6, essential fatty acids, choline, inositol, magnesium and methionine for its production. Take 1 to 2 table-spoonsful granular lecithin daily.
Magnesium	Nuts, soya beans, green leafy vegetables, (spinach, kale, beetroot tops), fruits, grains, peas, lima beans and molasses.	800mg daily. Aids B_6 in producing lecithin.
Methionine	Eggs, soya beans, soya flour, brazil nuts, sesame seeds and meal, wheatgerm and brewer's yeast.	Needs to produce choline, therefore lecithin, with protein.
Pectin	Skins of fruits, pulp and pulp of citrus fruits.	A polysaccharide providing fibre in the diet.
Potassium	Carrots, celery, parsley, spinach, fruit, vegetables, nuts and whole grains.	Balanced potassium/sodium content important in obesity and hypoglycaemia.

CHAPTER FIVE

RAW FOODS

It is interesting to learn that recent research into raw foods is confirming earlier claims. Whilst a great deal remains to be discovered, experiments using raw foods on both humans and animals show great potential. Research in Sweden found substances in raw foods which gave greater vitality. A lack of these substances resulted in a lower standard of health. A Japanese doctor ate a diet of

raw grains and vegetables, finding that he had excellent health. After a period of time he ate exactly the same foods cooked, and suffered from anaemia and oedema (dropsy). An experiment with twelve arthritic patients resulted in eight of the patients showing great improvement, with some weight loss.

Other experiments have shown improvement in hair, skin, energy, aches and pains and various symptoms all improved, pre-menstrual tension reduced and high blood pressure lowered. Above all, weight was reduced with often an improvement in body shape. A raw food diet could be an answer to the problem of cellulite, a condition in which tissue in some areas of the body thickens, leading to podgy thighs and upper arms, and unsightly bulges. Even a healthy person benefited, being more relaxed and having more energy.

Raw Food Diet

A raw food diet, for even as short a time as one or two days each week, or at regular intervals, would benefit a gall bladder sufferer immeasurably, both for the enzymes, most necessary in the production of bile, and for obesity.

A day's menu is not too difficult to plan. For example:

On rising: Fresh fruit juice, sipped slowly if full strength. If diluted preferably use bottled spring or mineral water.

Breakfast: Muesli, similar to recipe on page 39, adding fresh fruit in season, other raw fruit as desired and nuts and raisins.

Lunch: Large raw salad, with a heaped tablespoonful each of sprouted seeds, sunflower seeds and milled nuts.

Select three or four items from: grated carrot, raw beetroot, chopped onion or leek, salad greens, cabbage, celery, celeriac, fennel, radishes, or cucumber. The salad may be dressed with olive oil and lemon juice with herbs added.

Dr Bircher-Benner recommended that a salad should consist of two or three finely grated items with green

salad, with a dressing of two tablespoonsful of olive oil, two teaspoonsful of lemon juice, with a teaspoonful of grated onion, a pinch of grated garlic, some honey, chopped chives and parsley, and a few other fresh herbs if desired. Use a liberal quantity of the dressing. Salad may be followed by fresh fruits – berries when in season, melon or other fruit.

Dinner: A raw savoury may be made by combining one tablespoonful each of carrot, celery and mushroom with one teaspoonful spring onion, chopping all very finely and binding with natural yogurt or egg yolk, with added mixed herbs to taste and finely milled nuts to form a firm mould. Chill. Serve on a bed of salad greens with some salad mixture as at lunchtime.

Fresh or dried fruit, the latter soaked overnight in water or diluted fruit juice, stones removed and the fruit chopped. Sprinkle with honey and grape juice if desired. Dates and walnuts, or nuts and raisins to follow.

Drinks: Any fruit juices, or herb tisanes, especially peppermint.

Obesity

A diet for obesity needs to be planned individually, as each of the several causes of overweight need different diets. For simple obesity due to eating too much carbohydrate the general diet outlined on page 26 will often be effective, and the reference to potassium/sodium balance on page 17 will provide guidance for an inclusion of the potassium-containing foods and a severe reduction of salt. Most types of obesity will respond to a raw food diet, and on this diet vitality will improve. The obese person may need to take a multivitamin supplement for a short time. Remember that prevention is better than cure; an overfed infant becomes an overweight child and later an obese adult.

Hypoglycaemia

Hypoglycaemia has been mentioned in connection with

obesity. Although obesity is present, the initial purpose of treatment must be to correct the low blood sugar by means of a high protein diet. All sugar and white flour and almost all wholewheat cereals must be excluded. Vitamin B is essential and to obtain this three brewer's yeast tablets should be taken with each meal. A snack of fruit or vegetable juice or nuts and raisins must be taken every two hours between meals.

Breakfast: A tumbler of fruit juice, followed by some raw fruit and protein: egg with 1 slice wholewheat toast and plenty of margarine, or nuts and raisins with two tablespoonsful each muesli and wheatgerm. Add skimmed milk or milk substitute.

Lunch: A protein dish of choice, with either salad or conservatively cooked vegetables; only one small potato or one slice of bread; fruit or yogurt to follow.

Dinner: Homemade soup, not thickened with flour, protein dish with salad or vegetables as at lunch; fruit or yogurt to follow.

The fruit juice or other snack must be taken at two-hourly intervals between meals, and a small quantity taken to the bedroom at night. One should persist with this diet until all signs of fatigue and other symptoms have cleared. Only then must a reducing diet be undertaken, if it is still necessary, and care must be taken not to have a diet low in protein.

CHAPTER SIX

RECIPES

The initial difficulties which present themselves in changing over to a wholefood diet are usually quickly overcome.

Vegetables

Use little or no salt, but if you must use some then it should be sea salt, which contains potassium. Conservative cooking of vegetables retains as far as possible the valuable minerals, trace elements and vitamins. Cook vegetables in the minimum of water, shredding the greens, chopping root vegetables into small pieces and tossing them in boiling water. Cook them until still slightly crisp, with a 'bite', and use any remaining water for soup, gravy or a savoury drink.

Vegetables may be steamed. A pressure cooker should be used with caution, as it is so easy to overcook and lose valuable nutrients. Scrub potatoes and bake in their skins, greasing or oiling them to soften the skins, wrapping in greased greaseproof paper and foil. Potatoes can also be boiled in their skins and have much more flavour. The potato contains B vitamins, minerals, protein, vitamin C. Only 22 per cent of vitamin C is lost in baking the potato, 19 per cent boiled in skin, between 50 and 75 per cent lost in frying or processing.

Brown Rice and Beans

Brown rice takes a little longer to cook than white, but has more flavour and much more nutrition. Beans are avoided by some people because they cause flatulence. Chemicals build up in the soaking which ferment and cause gases to develop. To avoid this, drain the soaked beans, cover with fresh-boiled water, then cook them in boiling water. The first water can have mixed herbs, garlic and a little yeast extract added to give flavour.

Salads and Greens

Do not soak salads or greens in cold water – they lose vitamin C.

When possible prepare salads just before they are to be eaten. Cover them if it is necessary to wait, so as to retain vitamin C.

Baking

In baking, recipes can be adapted, less sugar being used,

preferably substituting honey. Wholewheat flour is different, but with practice delicious cakes and pastries can be made. Wholewheat, home-made cakes are allowed, but not if dieting strictly.

Yogurt

Yogurt is valuable, having a beneficial effect on intestinal bacteria, and in gall bladder disease and can help reduce intestinal flatulence. Natural or home-made yogurt, especially if made from goat's milk, is to be preferred, and can be flavoured to individual taste with various fruits and honey.

Storing

One final point, store your food carefully.

1. Keep nuts and seeds in freezer or refrigerator, to prevent rancidity.
2. Keep oils in refrigerator after opening.
3. Keep various foods in glass jars, in the dark.
4. Store flour in cool, dry dark places, or refrigerate it.
5. Some research has shown that aluminium foil has a lead content; wrap items in paper first.
6. Of plastic containers, it appears that those made from polyethylene or polypropylene are safest, whilst PVC is the most dubious.
7. Do not store acid foods in either aluminium foil or plastic.

It should also be mentioned that stainless steel pans are the best for long-term use, or good quality enamelled iron pans unless the enamel has chipped. Research into aluminium pans has shown that salty, acid and alkali foods may attack the surface and leech traces of aluminium into the food, causing gastric upsets.

BREAKFAST DISHES

Muesli

1 tablespoonful each compost-grown breakfast oats, wheatgerm, sunflower seeds, seedless raisins, milled

nuts. 1 apple, other fruit in season, as desired. Fruit juice and/or yogurt to moisten. 1 tablespoonful liquid honey.

Soak the oats overnight in one tablespoonful of water. In the morning grate in the apple, including the peel if the apple is free from insecticide spray, add pear or other fresh fruit such as chopped pineapple, a few raw raspberries, strawberries, or chopped stewed apricots; add the other ingredients and mix lightly. Add fruit juice to moisten, top with yogurt.

Fruit Compote

½ lb (225g) each of prunes and apricots; a few dried figs and peaches if desired; 2 tablespoonsful seedless raisins. Honey to taste.

Soak the dried fruit overnight in water or diluted orange juice; soak the raisins in a teacupful of water. The following day stew the fruit, with honey if required. When cool add the raisins and water.

Raw Fruit Compote

1 pear, 1 apple, 1 orange, a few walnuts or hazelnuts.

Squeeze the juice from half the orange, chop or segment the other half, add the chopped pear and apple. Mix fruits and nuts, eat immediately.

A few raisins or a sliced banana may be added if there is no need to lose weight. Sprinkle with one tablespoonful milled nuts if desired.

SOUPS

Slimmer's Soup

3 sticks celery, handful each 3 green vegetables (spinach, curly kale, broccoli, dark green cabbage, leek tops, brussels sprouts), 2 large onions, 1 large carrot, a

few young dandelion leaves, 2 tomatoes or ½ cupful tomato juice and pinch mixed sweet herbs.

Chop all vegetables, put all into pan except tomatoes, just cover with stock or boiling water and simmer gently with lid on pan for 30 minutes. Add tomato juice or grated tomato, liquidize part or all of the soup, add more herbs to taste. Sprinkle with chopped parsley or chives to serve.

Leek and Tomato Soup

2 leeks, 2 large tomatoes, 1 large carrot (about 225g or ½ lb), 350g (¾lb) potatoes, olive oil, chervil or parsley.

Soften the finely sliced leeks (including green tops) in a little oil, add roughly skinned/chopped tomatoes, diced carrot and potatoes. Add ½ litre (18 fl oz) water or stock, simmer gently for 25 minutes. *Purée*, and sprinkle with chopped herbs to serve.

This soup is improved by using stock made from the coarser leek tops and finely chopped whole carrot.

Hearty Vegetable Soup

2 large potatoes, 2 large carrots, 3-4 large onions, 2 sticks celery, piece of swede, any green vegetable in season (quantity as desired), 1 clove garlic, parsley, 1 cupful cooked beans or peas, mixed herbs or bouquet garni, sunflower or olive oil.

Sauté the chopped onion and crushed garlic in 4-5 tablespoonsful oil until transparent, add chopped potatoes (unpeeled), carrots, celery, and stir quickly for a few minutes to soften. Add up to 2 litres (3½ pints) boiling water or stock, *bouquet garni* of herbs, simmer gently until vegetables are almost tender. Add the finely chopped greens and cook for a further ten minutes. Liquidize some of the soup, leaving some vegetables in pieces, add the cooked beans, adjust seasoning and herbs.

SALADS

A wide range of salad ingredients can be combined to give variety of flavours, so that a daily salad never becomes monotonous. Fresh or dried herbs can be sprinkled over the completed salad or over individual items to enhance the taste. Chives, parsley, sage, rosemary, marjoram and thyme (use these carefully) can easily be grown in the small garden, window-box or on the window-sill in pots.

Nothing is more delicious than a sprinkling of freshly cut herbs. Fennel and lovage grow to a height of almost two metres (about six feet), so need more space in the garden, but these plants add a delicious and less common touch to salads.

Fennel, with its anise flavour, enhances tomatoes, lovage gives a taste of celery when that salad vegetable is not available. There are two types of fennel, the English fennel, *Foeniculum vulgare* which is the one referred to here, use being made of its fine leaves, and Italian fennel, *Foeniculum dulce*, the white bulbous root of which is used in salad.

Prepare the salads just before consuming – vitamin C is lost by exposure to air, by shredding finely, cutting and chopping.

Green Salad

Chopped mixed greens (lettuce, endive, cress, chicory, watercress, finely shredded cabbage leaves, very young dandelion leaves), chopped spring onions, chopped celery heart, and grated carrot, mixed well, moistened with olive oil and lemon juice. Sprinkle with parsley to serve.

Mixed Salad

On a lettuce base, arrange grated carrot, grated raw beetroot, sprigs of watercress, small flowerets of raw cauliflower, decoratively around a heaped tablespoonful of cottage cheese with chopped chives. Top with rings of mild Spanish onion, sprinkle with salad dressing, and mixed herbs.

Winter Salad

Equal parts of finely chopped hard white cabbage, Spanish onion and grated carrot, mixed well and moistened with lemon juice and olive oil, or salad dressing. Some seedless raisins and sunflower seeds may be included or a few cashew nuts stirred in at the last moment.

Salad Dressing

Equal parts of sunflower, safflower or olive oil and lemon juice or cider vinegar.

Add a crushed garlic clove and a small quantity of mixed dried herbs, to taste. Kept in a corked salad oil bottle or screwtop jar (not metal top) this dressing will keep well in the refrigerator.

SAVOURY DISHES

Nut Roast

8 oz (225g) milled nuts, 1 oz (25g) wholewheat breadcrumbs, 1 large onion, 1 oz (25g) rolled oats, 1 egg, 1 or 2 tomatoes, 1 tablespoonful Marmite, Barmene or Yeastrel, (salt-free) sunflower oil, $\frac{1}{4}$ pint (150ml) stock, 1 tablespoonful chopped fresh herbs or 1 teaspoonful dried herbs.

Chop onion and cook until slightly browned in oil, add rolled oats and stock and cook until mixture thickens; add beaten egg and other ingredients, mix well and place in well-greased basin. Decorate with whole cashew nuts and cover. Bake for 25 minutes, or until browned, in a moderate oven.

This may be varied by using different nuts (but use a minimum of walnuts, their flavour is rather strong) or different herbs, or by adding chopped sautéed leeks, or grated carrots, or a little grated cheese if this is allowed in your diet.

Bean Savoury

6 oz (175g) red beans, or other beans, soaked and

cooked, 1 large onion, 4 tomatoes, ½ tablespoonful tomato *purée*, olive oil (about 2 tablespoonsful), wholewheat breadcrumbs, a little cheese if allowed.

Cook chopped onion in oil until tender, add beans, tomatoes and tomato *purée*. Mash well, or mix in a liquidizer. Put into greased oven dish, cover well with crumbs and a little cheese. Sprinkle with sunflower oil and bake until heated through and top is browned.

Baked Aubergine

1 medium sized aubergine, onion of equal weight, 2 tomatoes (skinned), 2 tablespoonsful sunflower or olive oil, oregano herb.

Slice the vegetables thinly, and put them in alternate layers in a casserole dish, sprinkling a pinch of oregano on each layer, finishing with onion. Pour the oil over the vegetables and bake in a slow oven, 140°C/275°F (Gas Mark 2) for 2½ hours.

This may be eaten hot, with jacket potato and green vegetables or cold with salad.

Risotto

4 oz (100g) cooked rice, 1 medium onion, 1 green pepper, 1 red pepper, pinch of dried or fresh rosemary, oil.

Cook chopped onion in oil, add chopped peppers and cook until almost soft. Add the cooked rice and rosemary to taste, add a little sea salt.

Serve with cooked butter beans and a green vegetable.

DESSERTS

Date and Apple

1 lb (450g) Bramley cooking apples, 4 oz (100g) dates, 2 tablespoonsful apple juice.

Cook the chopped apples and dates in the apple juice over gentle heat until soft. Mix well and pour into serving dish. When cool sprinkle with flaked almonds or milled nuts.

Fruit Salad

2 oranges, 1 grapefruit, 1 large pear, 1 apple, handful of cherries (stoned), teacupful apple juice, 1 teaspoonful each chopped lemon thyme and sweet cicely herb.

Segment and chop the oranges and grapefruit, removing all pith, and conserving the juice to add to salad. Thinly slice pear and apple, adding to apple juice immediately. Mix all ingredients together, cover closely in a cool place to allow flavours to blend, chill before serving.

Fruit Pudding

1 cupful each stoned and minced dates and raisins (not the seedless raisins), ½ cupful milled nuts, 3 cupsful grated carrots, ½ cupful melted margarine.

Mix well together, add a little orange juice if moisture is needed. Press into a well-greased dish, bake for 30 minutes in moderate oven – 180°C/350°F (Gas Mark 4).

This is delicious hot but may also be eaten cold.

DRINKS

Drinks should be taken between meals, not less than half an hour before a meal, or at least two hours afterwards.

Valuable drinks for gall bladder conditions are lemonade, for which a recipe is given, grapefruit juice, or grape juice, which may be bought bottled, or pear juice. Vegetable juices, for which a juicer is required (a longer method of making carrot juice, for example, is to grate finely then squeeze the grated mass through a fine muslin) can be most beneficial, and should be taken regularly when dieting strictly. Carrot, beetroot and cucumber,

combined, are superb for the gall bladder.

Herb teas are beneficial, especially peppermint, lemon balm, camomile flowers, or the special herb tea taken after meals to prevent gas and flatulence.

Lemonade

5 lemons, 1 litre (about 2 pints) water, honey to taste.

Squeeze the juice from the lemons, adding a curl or two of peel for flavour, dissolve honey in a little hot water and mix. A sprig or two of lemon balm or sweet cicely may be added.

Vegetable Juice

6 parts carrot juice, 5 parts each beetroot and cucumber.

Mix together. If possible a total quantity of 275ml (½ pint) of the above combined juice should be taken daily.

CHAPTER SEVEN

LOOKING TO THE FUTURE

The final pages of the book are not the end of the story. Allow the ideas on wholefoods diet to become part of your life, read more widely so that you get to know something about food values and become an expert in preparing delicious meals. Then simply enjoy your food without worrying about it.

It would be wise to continue to diet fairly strictly for at least three months after the symptoms have cleared, and then to increase the range of foods gradually, reverting to the strict diet if symptoms recur. Health regained is too precious to lose again.

Balanced Eating

Have good food, enjoy it, but do not overeat, and do not eat when you are not hungry. Since the 1930s Professor C.M. McCay of Cornell University has studied nutrition and its effects on ageing. He experimented with controlled diets, rich in vitamins, minerals and proteins, low in carbohydrates. Feeding these diets to many generations of rats he concluded that although the rats were smaller and thinner than average, the healthiest of them survived in good health for the equivalent of a human life span of 140 years, with fewer and later signs of ageing. He became convinced that under-eating rather than over-eating led to a better standard of health and longer life.

Exercise

Good health and vitality need a basis of sound, balanced nutrition, but other aspects of life must not be overlooked. Adequate exercise is necessary whatever the state of health, but the value of both general and specific exercises in gall bladder conditions cannot be stressed too much. It has been proved that lack of exercise can contribute to the formation of gallstones by inhibiting the flow of bile.

One of the simplest, yet most effective exercises, is deep breathing. It can be practised for a few minutes each day, by an open window, or can result from activities such as jogging, brisk walking, and swimming. The exercises given by F.A. Horniman in his book *The Culture of the Abdomen* are valuable. A useful one, which has the effect of massaging the gall bladder and helping prevent constipation, is to repeatedly pull the abdomen in hard, using only the abdominal muscles and avoiding raising the chest whilst doing so. This can be done at any time of day, when waiting for a bus, standing at the workbench or carrying out domestic tasks.

Relaxation

Relaxation is important too. Tension inhibits much in the body and mind: circulation, digestion, muscular

movements, attitudes towards work and other people. Relaxation should be a way of life, a controlled relaxation in which no energy is wasted on rigid unbending attitudes, irritation at trifling imperfections, or baseless fears. Find some system of relaxation which suits you, whether it is through yoga, transcendental meditation or controlled deep breathing and conscious relaxation of muscles as outlined by Eeman, Jacobson or others, and practice it regularly.

Health and Happiness

Together with a physical and mental relaxation, adopt a positive attitude to life. Convert any negative thought, such as 'I can't' into 'I can' or 'I will try'. Positive, happy thoughts do have a beneficial effect on the digestion.

There are many ways in which you can build upon the ideas about foods outlined in this book: by learning more about wholefood or vegetarian cookery and becoming an expert; by introducing nutritious and delicious foods into your family's diet or when entertaining friends; by providing wholesome snacks for children to wean them away from junk foods – the foundation of life-long good health lies in infancy and childhood; by using wholewheat flour for all baking and by baking your own bread; by being prepared to pay a little more for good quality foods, planning your shopping, having simple meals and insisting on a high standard of fresh, natural and whole foods.

Life is a precious gift, and can be lived more fully. The choice often lies in our own hands.

The incidence of gall bladder troubles is directly related to eating habits.

This book explains how the gall bladder works, how faulty diet can cause the formation of gall stones, and how health and vitality can be restored.

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